Communication Tools for Children to Promote Landscape Water Conservation

WATER MANAGEMENT INTERNSHIP FINAL REPORT
SUBMITTED BY Angelique Santiago
California State University, San Bernardino (CSUSB)
1/16/08-05/07/08

Introduction

The Santa Ana River watershed in Southern California has one of the fastest growing populations in the United States. Residents of the watershed rely on five public water wholesalers charged with long-term planning to ensure the watershed maintains a sustainable supply of water for present and future needs. The wholesalers work in collaboration with a variety of public and private retail water agencies that deliver water supplies to the consumer.

While all water technically belongs to the public, agencies hold the legal rights to use groundwater as well as specific quantities of local surface water and imported water from Northern California and the Colorado River. Consumers pay a fee for all the costs incurred by suppliers to deliver water supplies. The Santa Ana Watershed Project Authority (SAWPA) is a Joint Powers Authority comprised of the five water wholesalers.

The SAWPA website (www.sawpa.org) points out that “The 2000 census indicated that the watershed is home to 4.8 million people; the inland areas include some of the fastest growing areas in the country”. Studies by a SAWPA consultant project show that populations will grow to about 7 million by 2025 and almost 10 million by 2050! Water demand “in the year 2000 for the watershed was 1.4 million acre-feet of water (467 billion gallons).” An acre-foot equals the quantity of water required to cover one square acre of land with one foot of water. It is projected that demand will increase 47% in the next 50 years, so that, in 2050, the watershed will require 2.1 million acre-feet (687 billion gallons) of water to meet demands. Because nearly 10 million will depend on the sustainability of this watershed, water agencies are desperately looking for methods to curb landscape water use that accounts for 60-70% of water used by most consumers annually.

My Watershed Management internship was aimed at urban landscape water use reduction. My project tested a means to prompt the use of native plant materials in residential gardens. Native plants conserve water because when they mature, little or no irrigation is needed.

Implementing the Watershed Management Project

Susan Longville, the Director of the Water Resources Institute (WRI) at CSUSB under the direction of the Principal Investigator, Dr. James Noblet, supervised my project. The WRI collaborated with the water conservation specialists Martha Davis and Liz Hurst from one of the watershed’s wholesale water agencies, the Inland Empire Utilities Agency. We developed a pilot program that tested the effectiveness of children acting as “messengers” to their parents and other adults by providing a convenient means to purchase native plants.

The pilot project implemented a key finding from a Statewide Landscape Water Use Survey that was conducted by the WRI for the California Urban Water Conservation Council. This survey, published in June of 2007, found that homeowners are not likely to be responsive to landscape water use messages delivered by urban water suppliers. Conversely, the homeowners did report they would be responsive to water conservation messages delivered by “a child in the family”. To implement the project, a three-way partnership needed to be established between the WRI, a commercial nursery, and a number of schools. Julie Vandermost, who operates Native Grow Nurseries with facilities in the watershed, was selected.

That is because my watershed management project is anchored in the standard practice of most schools, whether public or private, of raising additional funds for school programs not included in the operating budget such as field trips, supplies or new equipment. My project provided a substitute product for the items generally sold by schools such as candy, gift wrap or fancy food products. Water Conservation and Native Habitat Gardens consist of 8 drought tolerant starter plants that are shipped direct from the commercial nursery to the purchaser’s home at an appropriate time for planting. Each garden of 8 plants retails for $25 which a rebate of $11.46 to support school programs.

To solicit the schools to participate in the project, I mailed the following letter to ten schools that were recommended by the Inland Empire Utilities Agency, the WRI or the commercial nursery. I spoke with school principals, teachers and parents in the Parent Teacher Association (PTA). After four weeks of follow-up calls and emails, six schools were identified.

School Solicitation Letter:
Greetings,

I am contacting you on behalf of the Water Resources Institute (WRI) at California State University, San Bernardino, where I am employed as an Intern to coordinate a new school fundraising program. We believe this program is the first of its kind in the nation that promotes the practice of water conservation with school children selling drought-tolerant plants delivered directly from the nursery to the purchaser by California Overnight Express at the ideal time for planting.

Local water agencies promoting water conservation are partnering with the university and elementary schools in your community. Not only will children learn about the value of water conservation and native habitat gardens while making these products available to their parents, relatives, neighbors and friends. Children will also earn the needed funds for special school activities. Furthermore, the product being sold is healthy, sustainable and will not contribute to childhood obesity that, unfortunately, is at epidemic levels in the Inland Empire.

There are four distinctive gardens described in the (attached or enclosed) flyer that the children will sell for $25 apiece. For each garden sold, your school will receive more than $11 for student needs. Each garden includes eight plants in a biodegradable container that will arrive at the purchaser’s door by California Overnight Express, direct from the nursery. The sale will take place in March, with the gardens arriving in May—during the ideal planting season for drought-tolerant seedlings. As you will note from the order form, purchasers are given the option of donating the gardens to the school. Should you wish to have this option excluded from your school’s sale, your order forms can be modified. But we encourage every school to have a garden for the children to tend, even if these plants constitute your first effort.

Thank you for considering this innovative school fundraising program. Should you choose to participate, I will come to your school before the sales program kick-off to provide an entertaining and informational presentation for the children to learn about water conservation and the drought-tolerant plants that provide native habitat. The WRI is securing prizes for the sales program such as theme park tickets, pizza parties, gift certificates, etc. All I need at this time is a firm commitment from your school to participate before the deadline on February 15th. I’ll take care of the rest.

Sincerely,

Angélique Santiago
WRI Intern/Coordinator of the Water Conservation and Native Habitat Gardens
909.537.3688
santa300@csusb.edu

During the course of my watershed management internship with the WRI, I participated in the creation of program materials for my project. The flyer Water Conservation and Native Habitat Gardens illustrates and describes the four drought-tolerant collections offering 32 native plants. The flyer also describes the attributes of each plant such as fragrance, color, size, textures, what specific birds and butterflies that plants attract in the food/life cycles and comparisons of water usage of natives vs. non-natives. Each child participating in the program received a two-sided color copy of the flyer and an order form for customers to select the products they wish to purchase.
Water Conservation and Native Habitat Gardens

**Songbird Garden**
The plants in this garden provide food and shelter for native birds. This garden will include 3 or more of the following species:

- **Ceanothus greggii (creosote bush)**
- **Asclepias curassavica (milkweed)**
- **Zea mays (corn)**
- **Lavatera trimestris (lavatera)**
- **Eriogonum fasciculatum (walnut oak)**

**Butterfly Garden**
The plants in this garden are important plants for native adult butterflies or butterfly larvae. This garden will include 3 or more of the following species:

- **Asclepias syriaca (butterfly weed)**
- **Verbesina encelioides (encelia)**
- **Zea mays (corn)**
- **Lavatera trimestris (lavatera)**
- **Eriogonum fasciculatum (walnut oak)**

*This garden may also include:*
- **Concepcion pygmaea (great monkeyflower)**
- **Malacothrix fasciculata (bush monkeyflower)**
- **Lavatera trimestris (lavatera)**
- **Eriogonum fasciculatum (walnut oak)**

*Note: All plants in this garden are selected for their ability to provide nectar and pollen for pollinators.*
Water Conservation and Native Habitat Gardens

**Songbird Garden**

The plants in this garden provide food and shelter for native birds. This garden will include 5 or more of the following species:

- *Zea mays var. indurata* (cornbread)
  - Perennial 3-4' tall, doughy, fluffy, and will look better with a constant water environment. Can be used in pots as a bog plant.
  - Good for wet soil but requires a lot of moisture. Leaves turn yellow in winter.
  - Ideal for butterflies, pollinators, and other wildlife.

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This garden may also beanga...
Water Conservation and Native Habitat Gardens

Planting native and California-friendly drought tolerant plants helps the environment by reducing water usage and providing habitat for native birds and insects. Please help your local school and native fauna by planting one of these environmentally friendly gardens.

Each garden will include a minimum of 3 of the species listed for a total of eight 3 inch plants. Each garden is $5. Taxes and shipping are included in price. Gardens may also be donated to your local school.

**Aromatic Garden**
The leaves of the plants in this garden are small and odorless. These plants are easy to maintain and can be enjoyed by most everyone. This garden will include 3 or more of the following species:

- *Artemisia californica* (California wormwood)
  - Grayish-white, 6 in. tall. Needs full sun; prefers well-drained, sandy soil.
- *Amaranthus hybridus* (Negro grass)
  - Red or purple, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Lavandula angustifolia* (English lavender)
  - Lavender-purple, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Salvia spicata* (Mexican bush sage)
  - Pink or purple, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Eupatorium capillifolium* (Swamp milkweed)
  - Yellow, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Gaura lindheimeri* (Bee plant)
  - White, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.

**Grasses Garden**
Grasses are an important part of the native ecosystem and native prairie in San Bernardino County. The plants in this garden are either grasses or grass-like species that are typically used in ornamental gardens. These plants are easy to maintain and can be enjoyed by most everyone. This garden will include 3 or more of the following species:

- *Carex praegracilis* (threaded sedge)
  - Yellow-green, 2 in. tall. Needs full sun; prefers well-drained, sandy soil.
- *Calamagrostis x acutiflora* (wheatgrass)
  - Tall, 3 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Festuca rubra* (red fescue)
  - Red, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Avena fatua* (wild oat)
  - Green, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Arrhenatherum elatius* (brome)
  - Yellow-green, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Festuca glauca* (blue fescue)
  - Blue, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.

This garden may also include:

- *Salvia officinalis* (Sage)
  - Pink, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.
- *Lavandula spica* (Lavender)
  - Blue-purple, 2 ft. tall. Needs full sun; prefers well-drained, sandy soil.

http://wri.csusb.edu/HSIWeb/WATERSHED%20MANAGEMENT%20INTERNSHIP_Sa...
Order Form:

Spring 2008 Pilot Water Conservation and Native Habitat Gardens

Sponsored by the Water Resources Institute, California State University San Bernardino
In partnership with local schools, water agencies of Southern California and Native Grow Nursery

Thank you for agreeing to participate in the 2008 Spring Pilot Water Conservation and Native Habitat Gardens program. By giving the children in your school an opportunity to act as water conservation ambassadors as they sell drought-tolerant gardens to raise needed funds for school programs, you are helping the university test this innovative project. We appreciate your participation in this pilot program and plan to offer a Fall 2008 Water Conservation and Native Habitat Gardens program.

Should you have any questions at any time, please contact Susan Lien Longville, Director, CSUSB Water Resources Institute at (909) 537-7684 or slongvil@csusb.edu

School Name: ____________________________________________
Address: _______________________________________________
List School Fax number if applicable: _________________________

School Contact Names
For student orders: _______________________________________
For school assembly or classroom presentations: _______________
For school garden programs: ________________________________
Other: ___________________________________________________

Contact Phone/Fax/Email:
For student orders: _______________________________________
For school assembly or classroom presentations: _______________
For school garden programs: ________________________________

For the schools that wished to participate in the project, I worked with the WRI to develop a Partnership Agreement. I used the agreement with school representatives to identify the dates of the sales program and the number of children that would be participating.
Target Date for Spring Garden Sales Program to begin: __________________________

Target Date for School Garden Program Assembly: __________________________

Estimated number of Children eligible to sell gardens: __________________________

Projected sales (optional): ________________________________________________

Sales Options Selected by School (select one or more)

1. □ School accepting garden orders and payments from students only
2. □ School accepting garden orders and payments from teachers and staff
3. □ School accepting faxes from purchasers using
   http://www.calnativegardens.org/
4. □ School agrees to surcharge of $.77 per garden permitting purchases with credit card

Donated School Garden Options Selected by School (select one or more)

1. □ School accepting donated plants (spring delivery)
2. □ School prefers to utilize plant credits for trees and/or shrubs that will be used on school campus.
3. □ School NOT accepting donated plants and NOT giving purchasers the option of donating plants to a local demonstration garden
4. □ School NOT accepting donated plants BUT giving purchasers the option of donating plants to local demonstration garden
5. □ School requests assistance in exploring school garden program

What type of information do you require from Native Grow Nursery to transmit payment for gardens? __________________________

____________________________________
Authorized School Representative                                             Date

I began my research on water conservation to design a series of activities to teach children on how to be effective communicators about native and drought-tolerant plants that help the environment and provide habitat for native birds and insects. I conducted a literature search of educational material that has been designed for children to learn about the water cycle and water conservation. Based on the summary, I developed educational materials and games to go along with the products the children sold including when/how to plant and care for natives, what makes a native plant different from typical nursery plant, crosswords, and water usage and the benefit of providing habitat for birds, butterflies and native insects.

I chose to present a PowerPoint lecture as a fun and interactive way to teach children. I developed 20 slides with lots of fun transitions and sounds. I conducted a literature search on water conservation tools for children where I found loads of useful and fun information that children would appreciate and formulated a way to make the water conserving message stick; I used fun fonts, layouts, and pictures, and also added humor into the presentation. It was such a joy seeing those kid’s faces light up when the bumblebees moved or the birds started twittering. I also talked about native plants and their importance; I went into detail about the gardens and their flowers, which led to the meaty issue: the Water Conservation and Native Habitat Program.

The kids had a lot of fun during the assemblies and loved to answer my questions for a Water Resources Institute Frisbee. Without the assets of the Water Resources Institute my presentation would have never been shown, and none of those kids would know how many gallons of water they waste when they leave the faucet on while

http://wri.csusb.edu/HSIWeb/WATERSHED%20MANAGEMENT%20INTERNSHIP_Sa... 4/24/2009
We only have a little to use

- Ninety-seven percent of the water on the earth is salt water. Salt water is filled with salt and other minerals, and humans cannot drink this water.
- Ninety-seven percent of the water on the earth is salt water. Salt water is filled with salt and other minerals, and humans cannot drink this water. Although the salt can be removed, it is a difficult and expensive process.

Less than 1% of all the water on earth is fresh water that we can actually use. We use this small amount of water for drinking, transportation, heating and cooling, industry, and many other purposes.

What If There Were No Water?

- No Life
- Everything needs water

Atacama is the driest place on earth!

Do you know how much water it takes to:

- Brush your teeth? - 2 to 5 gallons
- Flush the toilet? - 1.5 to 4 gallons (each flush)
- Take a shower or bath? - 17 to 24 gallons
- Using the dish washer? - 8 to 15 gallons
- Washing the car? - 50 gallons
- Filling a 14 x 24 swimming pool? - 10,710 gallons.

Wasting Water

- About HALF the water we use each year is used outdoors by watering the garden and lawn, filling the swimming pool and washing the car!
- Ways to reduce your water use outside include using a shut-off faucet when washing the car and landscaping with plants that use less water.

Drought Tolerant Plants

- Drought tolerant plants are plants that are native to California.
- Therefore using less water to stay alive and pretty.
- Planting native and California-friendly drought tolerant plants help the environment by:
  - Use LESS WATER
  - Providing native habitat for birds and insects

READY TO DO YOUR PART?

We Use Even MORE Outside

- Washing the car: 50 gallons
- Filling a 14 x 24 swimming pool: 10,710 gallons.
I solicited prizes from sponsors that will be award to children for participating and excelling in the Water Conservation and Native Habitats Garden Sale such as toys, books, restaurant coupons, theme park tickets, aquarium tickets etc. I contacted various sponsors that I believed the children participating would enjoy, such as: Castle Park, Speed Zone, The Aquarium of the Pacific, Fiesta Village, Dave and Busters, Disneyland, Knott’s Berry Farm, Los Angeles Zoo, Rainforest Café, Scandia and the San Diego Zoo. The kids who received these prizes were tremendously pleased and excited to participate next year. The children responded very well to the anticipation of prizes for their hard efforts. I used the following letter to receive these gifts: two tickets to the Aquarium of the Pacific, four free golf passes for Castle Park miniature golf, and an unlimited golf pass to Fiesta Village.

California State University San Bernardino 5500 University Parkway San Bernardino CA 92407

Greetings,

I am contacting you on behalf of the Water Resources Institute at California State University, San Bernardino where I am employed as an intern to coordinate a new school fundraising program. We believe this program is the first of its kind in the nation promoting the practice of water conservation by having school children sell drought-tolerant plants delivered to the purchaser by California Overnight Express from the nursery at the proper time for planting.

Local water agencies promoting water conservation have partnered with elementary schools for a mutually beneficial outcome. Not only do children learn about the value of water conservation and native habitat gardens and make these products available to their parents, relatives, neighbors and friends. Children also earn the needed funds for special school activities.

The Water Resources Institute will utilize the donated (tickets, products, etc) we are requested to award the three students who sell the most gardens with a prize. I know that this donation will bring such heart warming smiles to their adorable little faces. Thank you for your consideration regarding this matter. I hope to hear from you soon. Our nonprofit status number is: 95-6067343.

Sincerely,
Angelique Santiago
Water Resource Institute Intern
500 University Parkway
San Bernardino, CA 92407-2393
909.537.3688
Results of the Watershed Management Project

SPRING SALES OF WATER CONSERVATION AND NATIVE HABITAT GARDENS

<table>
<thead>
<tr>
<th>School Name</th>
<th>Location</th>
<th># of Students participating</th>
<th>Grade Level</th>
<th>Date of Sale</th>
<th>Gardens Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belvedere</td>
<td>Highland</td>
<td>745</td>
<td>K-6</td>
<td>3/21-4/1</td>
<td>107</td>
</tr>
<tr>
<td>Liberty Elementary</td>
<td>Ontario</td>
<td>863</td>
<td>K-6</td>
<td>4/7-4/17</td>
<td>34</td>
</tr>
<tr>
<td>Peppertree Elementary</td>
<td>Upland</td>
<td>770</td>
<td>K-6</td>
<td>3/14-3/27</td>
<td>9</td>
</tr>
<tr>
<td>Poway High School</td>
<td>Poway</td>
<td>60</td>
<td>9-12</td>
<td>3/14-3/27</td>
<td>36</td>
</tr>
<tr>
<td>San Gorgonio High School</td>
<td>San Bernardino</td>
<td>100</td>
<td>9-12</td>
<td>3/7-4/1</td>
<td>40</td>
</tr>
<tr>
<td>Urbita Elementary</td>
<td>San Bernardino</td>
<td>60</td>
<td>K-6</td>
<td>4/8-4/17</td>
<td>7</td>
</tr>
</tbody>
</table>

The results of each school vary dramatically and I am interested in analyzing what worked and what didn’t. The following highlights are nonetheless worthwhile.

- Belvedere Elementary located in Highland, California sold over a hundred gardens and they are considered a low-income school, and did not expect to receive that many sales.

- Dominic Hernandez sold 16 gardens all by himself, and Colin Wicker sold 10. Carol Ward who is in charge of Belvedere’s booster club said, “We will definitely do this fundraiser in the spring of next year”.

- Liberty Elementary is located in Ontario, California, and the students are known for not participating in fundraisers. Even though their projected sales were about 150 gardens, they sold about 46; nevertheless the school’s administration did have some mishaps. Katherine Thomas in charge of fundraising, resigned halfway through the schools fundraiser, so it can be assumed that there was no rallying up of the kids to sell.

- Urbita Elementary located in Highland, California hosts an Earth Savers club and they signed up for the project. They only sold seven gardens but that was amidst another fundraiser they were currently participating in. Linda Gregory said that “We will try again next year and maybe giving the kids more time to sell”.

- Poway High School located in Poway sold a total of 36 gardens, which was great for a high school class.

- San Gorgonio High School located in San Bernardino sold a total of 40 gardens and they plan on using the proceeds to build a native garden in their own school.

Watershed Management Internship GIS Requirement

My internship also included 20 hours of IT training to gain competency with geospatial tools and share the results of my project of the WRI’s website (www.wri.csusb.edu) for decision support. The WRI’s IT Consultant Lisa Pierce introduced me to an application tool set within ArcGIS called ArcMap. I learned how to present the data from my project in a map using various datasets. ArcMap taught me to represent geographic information as a compilation of layers and symbols. With the opportunity to partake in the Watershed Management Internship, I have learned to successfully create a ArcMap visualization to map where the schools are located in which I taught children about water conservation who in turn sold Water Conservation and Native Habitat Gardens. Learning how to use ArcMap has given me another way to tell a story without any words, which I found then and still find fascinating. I liked learning how to sift through the layers and input my own symbols that helped to further explain my information and/or data. Nevertheless without the Water Resources Institute I would have never been able to access ArcMap and would have never been given the opportunity to learn how to successfully use the application. I am very grateful for the having been able to learn about this application; in fact I am enrolling in an ArcGIS class here on campus this upcoming quarter so that I may gain more valuable insight about this great application and its many uses. The following map and legend display the five cities the project pilot was hosted in, the location of the schools, as well as its surrounding cities and freeways.

ArcMap Visualization:
Conclusion

Schools applauded my project because children learned about water conservation and how drought-tolerant native plants provide habitat for native species. Public health officials praised the program because the children had a healthy product to sell because candy and food sales contribute to the epidemic rates of obesity. Adults who purchased the gardens were grateful for the information about native plants because most have never tried them and the convenience of home shipment.

The knowledge I have acquired, the challenges I have come up against, the achievements I have earned, and the works in progress that have evolved while utilizing the services, equipment, and superior knowledge offered to me by the Water Resource Institute helped me learn valid information about water conservation and also how to sell the idea of “saving water” to children and communities. I am so blessed to been given this opportunity of having an internship within the Water Resources Institute, I have learned valuable life lessons by inter mingling with successful people who I admire greatly. I only hope that I can continue helping the environment through conservation and through the Water Resources Institute. This project has permitted me to use my Mass Communication major through hands on experiences such as presenting assemblies for schools, contacting vendors, and also encouraging schools to take a chance with our project. I am so excited to submit another application for another internship; I loved learning about our environment and in turn teaching and encouraging others to help save our world.

Knowing that all of these schools are receiving water from the Santa Ana Watershed, I could not help but be pleased that all of those communities who purchased the plants helped benefit the Watershed. Upland, San Bernardino, Ontario, Poway, and Highland, were included in the pilot project and all six helped conserve water that normally would have been used watering gardens. The potential of this project is astronomical. Knowing that almost fifty percent of all the water that Californians use is used out doors; for watering the lawn or gardens, this project saves a lot of that wasted water, and allows more water to be saved in the watershed. Now imagine 50 or 60 schools selling these drought tolerant plants that do not consume a lot of water. Residents in our communities could recede on their outside watering by almost half! That can save millions of gallons of water in the Santa Ana Watershed, especially at a time on Earth where it is so vital that we do so.

Watershed Management Application:

WRI Internship in Watershed Management Program
Application Form

Student Name: Angelique Santiago
Grade Level: Sophomore
Address, City, ZIP: 15253 Yeager Ave, Fontana, CA 92336

Phone: (909) 350-8600 Email: angeliquepapi@yahoo.com

Project Name: Communications Tools for Children to Promote Landscape Water Conservation

1. Project Description

Southern California is experiencing one of the driest years on record and may be entering an extended drought that will impact water supplies in the Santa Ana watershed. The watershed management internship project I am proposing in my field of communications is a collaborative undertaking with staff the Inland Empire Utilities Agency (IEUA) that supplies water in the community where I live and local elementary schools that have drought-tolerant California Friendly Garden on their campus.

WRI is partnering with IEUA to launch a new pilot program testing the effectiveness of elementary school children as "messengers" to reduce landscape water use that accounts for 50-70% of household water use. The Water Conservation and Native Habitats Garden Sale is a substitute for the wholesale marketing program used in the school for classroom fundraising involving the sale of candy or gift items to parents, relatives and neighbors. The products in the pilot are four collections of 8 drought tolerant plants that will be shipped direct from the nursery to the purchaser's home at the appropriate time for planting.

My proposed project would be titled Communication Tools for Children to Promote Landscape Water Conservation. It will consist of research and designing a series of classroom activities that I will conduct with children on how to be effective communicators about native and drought-tolerant plants that help the environment and provide habitat for native birds and insects.

I believe it will be up to our community's youth to help influence adults to adopt water saving techniques. My project would provide an opportunity for me to practice the communication techniques I am learning and train children to influence the adults who control the garden and the tap.

2. Specific Tasks

- Conduct a literature search of educational material that has been designed for children to learn about the water cycle and water conservation.
- Develop a summary of the four drought-tolerant collections of eight plants, 32 in all, that will be sold in the Water Conservation and Native Habitats Garden Sale. The summary will list the attributes of each plant such as fragrance, color, size, textures, what specific birds and butterflies that plants attract in the food/life cycles and comparisons of water usage of natives vs. non-natives.
- Based on the summary, I will develop educational materials and games to go along with the products the children will sell including when/how to plant and care for natives, what makes a native plant different from typical nursery plant, crosswords, water usage and bird/butterfly identification.
- Solicit prizes from sponsors to be awarded to children for participating and excelling in the Water Conservation and Native Habitats Garden Sale such as toys, books, restaurant coupons, theme park tickets, etc.
- Interview teachers and students and use their words and photographs to produce a School Newsletter about the role of drought tolerant California Friendly plants to reduce landscape water use. Lifestyle changes the community needs to undertake will also incorporate healthy communities/healthy eating
- Participate to the extent possible in IEUA's Garden In Every School program also in place at the participating elementary schools

3. Skills and Experience Gained

- I will learn about program design from start to finish, communication techniques, water conservation, natural resources of the Santa Ana watershed and how to share the knowledge gained in this project with stakeholders in the Santa Ana Watershed on the WRI’s geospatial Decision Support System.

- 4. Benefit to Santa Ana watershed

- If my plan was given the opportunity it would help the Santa Ana watershed by helping subdue the considerable demand for the water contained in it. Helping the community learn about conserving water will allow the water to go to other important venues in the community rather than the grass on our lawns. It would have positive impacts on the watershed because the community would be more aware of the importance of the Santa Ana watershed, and would help to eliminate wasted water when necessary.

5. Stakeholders in the Watershed

I will be working closely with the IEUA but be in contact will be the National Resource Conservation Service, Resource Conservation Districts, and schools.

- 6. Final Project

- At the end of my internship with the Water Resource Institute, I will provide digital copies of all the materials produced and submit a Final Report accounting all of the experiences that I had doing the project including my journey through the community doing my best to raise water awareness. It will include the steps I took to get my project perfected, and also pictures of some of my work. It will be shared with stockholders in the Santa Ana watershed, so it will be a terrific report.

7. Supervisor

This project will be under the supervision of the Director of the Water Resources Institute (Susan Lien Longville) and the Water Resources Technician (Liz Hurst) at IEUA.
8. Supplies

In order to put my best foot forward for this project I will need some supplies. In order to make the brochures I will need high-quality paper, ink and toner. I will also be making a presentation for the kids at different schools; for those presentations I will need poster board, and I will be doing an art and craft with the class I am presenting too. I will need assistance with gas for I will be driving to lots of different school within the community. The supplies are required for my projects are very reasonable and will go a long way.